From: Rochlin, Kevin
Sent: Monday, October 28, 2013 4:36 PM
To: Barbara Ritchie
Cc: Greutert, Ed [USA]; Zavala, Bernie; Stifelman, Marc; Douglas.Tanner; Scott Miller - Idaho DEQ (Scott.Miller@deq.idaho.gov); Rochlin, Kevin; Kelly Wright; susanh@ida.net
Subject: Comments on the RD Work Plan
Attachments: Comments FMC Work Plan 2013.docx

See attached.

Kevin Rochlin

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL CLEANUP

October 28, 2013

Reply to
Attn. of ECL-111

Sent Email Only

Ms. Barbara Ritchie
FMC Corporation
1735 Market Street
Philadelphia, Pennsylvania 19103

RE: Unilateral Administrative Order for Remedial Design and Remedial Action
EPA Docket No. CERCLA 10-2013-0116

Review comments, Remedial Design Work Plan for the FMC OU August 2013

Dear Ms. Ritchie:

EPA has reviewed the referenced document. Comments are enclosed. FMC should provide responses per the referenced order.

Sincerely,

Kevin Rochlin,
Project Manager

Enclosure

TECHNICAL REVIEW COMMENTS ON THE REMEDIAL DESIGN WORK PLAN FOR THE FMC OU DATED AUGUST 2013

October 25, 2013

General Comments

1. Sections 4.1 through 4.4 discuss the remedy elements while Section 6 presents the project schedule. Including the following items in the plan would facilitate the understanding of the deliverables and schedule for the project:

    - In Section 4, include a list of anticipated deliverables under each remedy element and include a summary table that shows which remedy elements (if any) will be combined into a single set of project documents.

    - In Section 6, modify the existing Table 6-1 or create a new table that includes the anticipated schedule for the deliverables associated with each remedy element.

Specific Comments

2.1.5 Hydrology and Hydrogeologic Setting, page 2-3

1. A statement was provided in the text that reads "*Between I-86 and American Falls Reservoir, the Michaud Flats aquifer system discharges 200 cubic feet per second (cfs) of groundwater to the Portneuf River".* No reference was provided on how that flow or discharge of the groundwater was determined. A reference should be provided. It may be better or more relevant to this cleanup instead to include in this text the amount of groundwater that discharges to the Portneuf River from the FMC plant with a reference.

3.1.3 Preliminary Extracted Groundwater Management Options Design, Option B, page 3-5

2. Total phosphorus (orthophosphate) should also be included or be considered for treatment. Table 3-1 selected monitoring wells that are cross-gradient and down-gradient of the extraction network. This table should select data or groundwater quality of the monitoring wells directly up-gradient of the extraction system or within the flow path. These groundwater concentrations would be equal or greater than the Pocatello POTW influent standards. Table 4-2 in this document shows a maximum detection concentration of 697 mg/L of Phosphorus.

Page 3-3. Re: Capillary break in caps. What is this referring to? If using slag to form break, isn't gamma emission an issue?

Section 3.1.2, Page 3-4. Note that the groundwater remedy also must lead to a permanent remedy for groundwater based on the information obtained.

Section 4.0, Page 4-2. This section describes remedy elements and performance standards. Note in the document that performance standards testing will be in the PSVP not just in design and RA construction.

Section 4.1.2, Page 4-3. Performance standards for ET cap. How do you test whether or not infiltration is occurring through the cap? This question is more a placeholder as it is a design issue.

Section 4.1.3, Page 4-5. The performance standard for the gamma cap will include a direct measure of effectiveness.

Section 4.1.5, Page 4-7. Excavation. There will need to be a performance standard measuring gamma.
Section 4.2.2, Page 4-9. Gas monitoring performance standards will need to be in the final PSVP.
Section 4.3.1, Page 4-10. Text should state that additional changes to the groundwater system may be necessary for meeting the performance standards which will be implemented after ESD or other ROD modification. Operation should be for determining how to remediate groundwater, the purpose of operation is not to obtain a TI waiver.
Table 6.1 and 6-2. EPA review may take as long as 60 days to ensure participation of all the stakeholders.

SHOSHONE-BANNOCK TRIBES
COMMENTS- Remedial Design Work Plan for the FMC OU
August 2013

It is very important to the Shoshone-Bannock Tribes that this, and all documents required by the UAO, reasonably recognizes and documents this site is within the Fort Hall Reservation. Reading the above document would require one to look very hard and identify in an obscure location this site is within the Reservation and impacting our resources.

Section 1.3

Somewhere in this section should include the Shoshone-Bannock Tribes, their role in review and project oversight.

Figure 1.3

Include the Tribes

Section 2.1

Identify this site is within the exterior boundaries of the Fort Hall Reservation.

Section 2.1.5 – Pg 2-3 1st full paragraph

Add and migrates into the Off-Plant OU as surface water and into springs which discharge onto the Fort Hall Reservation.

Section 2.2 Site History 3rd paragraph

Historical management of these materials has resulted in impacts to soils and shallow groundwater at the FMC Plant OU. In addition, downgradient discharge of shallow groundwater from beneath the FMC Plant OU into the Portneuf River has contributed to the impairment of surface water quality in the Off-Plant OU **ADD including the Fort Hall Bottoms within the Fort Hall Reservation which is a traditional sensitive cultural area.**

Add a short sentence identifying the deep aquifer beneath the FMC OU has also been impacted, with measurements of COCs to a lesser extent

Remove the following: it is estimated that FMC-impaired groundwater migrating downgradient from the FMC Plant Site northern boundary accounts for less than 5 percent of the total load of EMF site contaminants. If this remains in, qualify and provide specific details how this estimation is made and if EPA agrees.

Section 3.1.1- Pg 3-2 Last paragraph

Remove…. Therefore, the RCRA pond caps' design represents an overly conservative assessment of required thicknesses. Hydrogeological data was not generated and assumptions may not be appropriate with changing weather and moisture patterns.

Pg 3-3 Based on this calculation, a storage layer with minimum thickness of 24 inches would be necessary to store the anticipated winter precipitation in the Pocatello areas.

Weather in the local area has been irradict and changing. During 2013, daily rainfall amounts exceeded a six month average, it was noted on several different occasions where 2.5 inches to 4 inches of rainfall occurred. Tribes request new calculations based with a safety factor of 50% annual precipitation with calculations factoring that amount being delivered within a 24 hour timeframe.

Section 3.1.2 Preliminary Groundwater Extraction System Design

Gross Alpha, Gross Beta, Radium 226 must be added to the list of COC. Any water expected to be put in an evaporation pond, percolation pond, discharging to Portneuf River or anywhere else must include the radiological parameters present in the water. Any treatment options should

include sampling for a full suite of metals and radiologicals to identify any changes in concentration or species due to the treatment. Because this water is all discharging within the Fort Hall Reservation, we want to know exactly what chemicals (including radiological) are being put back into the water system that flows within our homeland.

Section 4.1.4 Integration of Caps

Monitoring of Phosphine, Hydrogen Cyanide, Hydrogen Fluoride should be done during all times of construction activities and soil movements at the site. These gases are known to be present at the site. Movement of soils and integration of CERCLA caps into the RCRA caps requires monitoring of all toxic gases known to be present at the site.

Section 4.2. Institutional Controls Program

Clearly spell out what legally enforceable institutional controls FMC plans to implement for all or part of the FMC OU including where they will file and what specifically will be filed. As appropriate for the needed control is vague. Also need to stress the importance of filing with the Shoshone Bannock Tribes Land Use Department not just Power County.

4.2.2 Gas Monitoring Program

A phosphine monitoring program will be implemented at RAs B, C, D, F1, and K where elemental phosphorus is present in the subsurface to identify any phosphine releases to ambient air or soil chemistry disturbances and to identify if phosphine is moving laterally or impacting ecological resources.

Phosphine must not migrate outside the caps or CERCLA OU. Monitoring of the soil chemistry must occur outside the OU as well as on the soil cover cap material.

4.3.1 Groundwater Extraction System Pg 4-10

The Shoshone-Bannock Tribes will vigorously oppose any Technical Impartibility Waiver FMC attempts to obtain and EPA proposes to offer in exchange for cleanup of groundwater at the FMC OU. If both EPA and FMC recognize the less than robust groundwater extraction remedy they selected will not achieve long-term protection a better remedy, regardless of expense should have been selected.

Stressing the aquifer during the groundwater extraction remedy can be reasonably expected to have far reaching impacts. Additional off-site groundwater well testing should be completed. Original wells thought to be impacted during the PASI and included in the original RI should be re-evaluated to identify any changes in COC presence.

Objective: 2) Reduce the migration of COCs in the groundwater to surface water that result in concentrations exceeding risk based concentrations (RBCs) or chemical-specific Applicable or Relevant and Appropriate Requirements (ARARs).

Prevent rather than reduce migration of contaminants off the FMC OU into areas used by the general public and Shoshone-Bannock Tribal members.

FMC OU Remedial Design Work Plan
August 2013
Idaho Department of Environmental Quality Comments
August 2013

General Comments

1. Several in-text references are not included in section 7.0 References; and some in-text citations do not match references in section 7.0.

Specific Comments

1. List of Acronyms; add the following: AFLB, CQA, EMF, ERP, GWCCR, QCP, RBC, RU, SUA, WUA and any other acronym omitted from the list.
2. Section 2.1.4, page 2-3 lines 1-3; Given the natural slope of the land surface at the FMC site, it is not likely that all rainfall, particularly thunderstorm / rain or rain-on snow, is entirely contained within property without engineered controls. Storm water runoff is also identified as a primary release mechanism in section 2.3.1. Please identify the type and location of runoff control and / or revise section 2.3.1 to be consistent with the retention of all storm water onsite.
3. Section 2.3.1, page 2-8, paragraph 2, line 4; change "surface runoff" to "precipitation".
4. Section 2.3.1, page 2-8, paragraph 3, lines 2-3; Include citation for data/report of air quality study; or remove statement regarding ambient air phosphine concentrations.
5. Section 2.3.2, Page 2-9 line 1; Add "shallow" between "all" and "groundwater"
6. Section 2.3.2, Page 2-9, paragraph 2, line 6-7; Precipitation infiltration was identified in section 2.3.1 as a primary pathway. Replace "runoff' with "infiltration".
7. Section 4.1.1. page 4-3, *Performance Standard*; Include containment of all stormwater run-off as a performance standard.
8. Section 5.3.4, page 5-6, bullet list; Add Idaho regulations pertinent to this remedy to this list and section 7.0 References.
9. Section 5.3.5, page 5-8, bullet list; Add any permit or water rights applications required by Idaho to this list.
2. Section 5.3.6.1, page 5-9, bullet list; Add "All permits and authorizations required by the state of Idaho" as a separate bullet.
3. Section 5.3.6.1, page 5-9, first bullet; Add "in compliance with Idaho well construction regulations (appropriate citation[s])".
4. Section 5.4.1, page 5-10, paragraph 1, line 4; Replace 'CQCP' with "CQAP".

5. Table 6-2, Planned dates are inconsistent with timeframes indicated in the "Schedule per UAO" and /or defined as timeframes in previous sections. Revise table to be consistent with narrative timeframes, or revise narrative timeframes to be consistent with table.
6. Table 6-2, Execute PTs to support Groundwater (GW) Remedial Design; Planned dates for comments and reports should be changed to 2014.